

## UI REACH: A Postsecondary Program Serving Students with Autism and Intellectual Disabilities

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### Abstract

Across the United States postsecondary education (PSE) options for young adults with autism and intellectual disabilities (ID) are emerging as a result of parent-professional advocacy group actions and legislation such as the Higher Education Opportunity Act of 2008 (HEOA). In this article the University of Iowa Realizing Educational and Career Hopes (UI REACH) Program, a thriving, well-integrated two year certificate program is described. We discuss the UI REACH model—its mission, student-centered and program goals, and strategies employed to ensure quality, sustainability, and continuous improvement. The student population, curriculum, staffing needs, and day-to-day operating issues are described. The experiences and perceptions of 14 students with autism spectrum disorder (ASD) suggest that the program facilitates a positive campus living-learning experience for these students. Challenges and recommendations for institutions of higher education considering developing, or in the early stages of developing, similar programs are presented.

The profiles of students with emotional and behavioral disorders (EBD) historically have been broadly described as externalizing and internalizing (Kaufman, Swan, & Wood, 1979) with the preponderance of students receiving special education services exhibiting externalizing behaviors (e.g., defiance, disobedience, temper tantrums, swearing, hyperactivity, destructive responses) (Coleman & Webber,

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2002). Internalizing behaviors such as anxiety, depression, moodiness, irritability, social withdrawal, and inattention are often overlooked by educators and families as indicators of a need for services (Merrill & Walker, 2004). Students with autism spectrum disorder (ASD) may exhibit both externalizing (e.g., temper tantrums, defiance) and internalizing (e.g., anxiety disorder, social withdrawal) behaviors and a range of cognitive aptitude (Adreon & Durocher, 2007). Although school-aged students with ASD today are more likely to be identified as needing specially designed instruction than in the past decade, until very recently there were limited postsecondary education (PSE) options available to them.

PSE opportunities for students with ASD are expanding nationwide. Legislation (e.g., the Higher Education Opportunity Act of 2008; the Individuals with Disabilities Education Improvement Act [IDEA], 2004) and the support and recommendations of influential departments and organizations (e.g., Autism Speaks; The National Council on Disability and Social Security Administration; The Council for Exceptional Children) have resulted in a burgeoning of secondary transition and PSE opportunities for students with ID, including ASD. Think College, a prominent website for students, families, and professionals identified 208 such programs located at community colleges, technical/trade schools, 4-year colleges, and universities (Think College, 2013). The significance of PSE to improved adult outcomes in such areas as employment (Moon, Simonsen, & Neubert, 2011; Zafft, Hart, & Zimbrich, 2004), sense of independence (Hendrickson, Vander Busard, Rodgers, & Scheidecker, in press; Neubert & Redd, 2008), and quality of life (Hughson, Moodie, & Uditsky, 2006) for individuals with disabilities is hailed but neither thoroughly documented nor fully understood.

Although a range of PSE options is available nationwide (Stodden & Whelley, 2004), there is considerable variation in the services and opportunities different institutions of higher education (IHEs) provide (Neubert & Redd, 2008). The general consensus of researchers and stakeholders is that a college or university campus is the ideal educational venue (Kleinert, Jones, Sheppard-Jones, Harp, & Harrison, 2012), but evolving campus-based programs are not well described in the literature and outcome data associated with types of practice is virtually nonexistent (Neubert & Redd, 2008). Understandably, the lack of program descriptions and outcome data make it difficult for students and families to identify the PSE option that best matches the student's interests, educational goals, and support needs.

Driven in part by the National Council on Disability and Social Security Administration (2000), many community and 4-year colleg-

es began to offer dual enrollment opportunities for students still in high school. Across the nation, transition and “5th year” programs are serving 18-21 year old students with disabilities in college settings with an emphasis on employment preparation and work experience (Papay & Bambara, 2011). Students in these transition programs tend to live at home and commute to work sites or the local college. For students with ASD and other ID who want to experience college in a more holistic way—living on campus, participating in student life, and fully identifying as college students, these transition programs may not meet their vision of the college experience.

Holistic PSE programs (e.g., College Living Experience in Columbia, MD; Carolina Life in Columbia, SC) designed to provide students with ASD and other ID a robust college life experience are a relatively recent phenomenon (Ludlow, 2012). Of these PSE options, some maximize existing college/university disability services bolstered in large part with volunteers and mentor/coach support (e.g., Cutting-Edge in Madison, WI). Others (e.g., Mason Life in Fairfax County, VA; Pathway in Los Angeles, CA; STEPS-Forward Inclusive Post-Secondary Education Society in Vancouver, BC; Transition Options in Postsecondary Settings in Cincinnati, OH) utilize existing university services, volunteers, and offer relatively intensive specialized services and individualized supports not typically available in colleges and universities. In these holistic models, students with ASD and ID take classes side-by-side with traditional college students, live on campus in residence halls or nearby apartments, and interact with other college students on a relatively continuous basis. There are also self-contained programs and schools (e.g., Transition to Independent Living in Taft, CA; Minnesota Life in Richfield, MN) that provide residential living, vocational preparation, life skills, academic programing, social engagement opportunities, and/or college preparatory work (e.g., Landmark in Putney, VT). These residential programs are campuses unto themselves. The length of study may vary from 2 to 4 years, typically culminating in the award of a special certificate.

A brief description cannot capture the rich variation among PSE options, yet reveals the growing range of PSE opportunities and bespeaks the need for detail in model and program descriptions. The recent escalation of PSE opportunities for individuals with ASD and other ID bodes well for options for improved life outcomes of these young adults. Extant data pertaining to individuals who have had some level of PSE document improved adult outcomes (e.g., improved earnings, competitive and inclusive employment; Zafft et al., 2004). However, the data continue to disclose superior outcomes for typically developing students (Kochhar-Bryant, 2007; Ludlow, 2012) and

for students with other types of disabilities (e.g., learning disabilities) (Wagner, Newman, Cameto, Levine, & Garza, 2006). Descriptive program information and outcome data are both needed to lead the field to evidence-based practices that will ensure positive life outcomes for students with autism and ID.

In this article, we describe The University of Iowa Realizing Educational and Career Hopes (UI REACH) Program in relative detail as a step toward improved understanding of one example of a holistic college experience program model. We present the UI REACH model with its focus on student-centered and programmatic goal areas, and we discuss activities associated with these areas. Student-centered goal activities include collaborative teamwork, the core curriculum, person-centered advising, inclusive residence hall life, integrated academics, community internships, and campus/community engagement. Program goal activities pertain to the advisory board, the support of university systems, the family-alumni association, community partnerships, campus wide supports, professional and staff development, and evaluation processes. We also review the perceptions of 14 students with ASD and make recommendations for future research.

#### *Students Served at UI REACH*

The UI REACH Program serves students 18-25 years old from across the U.S. (35% residents, 65% out of state;  $n=20$  states). Students' hometowns are rural, suburban, and urban communities (e.g., population range = 400 to >1,000,000). UI REACH students have a wide range of intellectual, social, independent life, and communication skills. The majority of students' academic achievement scores fall between the 3rd and 6th grade level. Similarly, overall cognitive/intellectual functioning, as measured by standardized intelligence tests, reveals intelligence quotients (IQs) (Mean=100, standard deviation=15) ranging from the 50's to approximately 100 with the scores of most students falling in the mid-60s to mid-70s.

Hendrickson et al. (2013) note that UI REACH students commonly have challenges in the areas of (a) attention span and memory, (b) time and money management, (c) organization, (d) self-regulation of emotions and behaviors, (e) language processing, (f) interpreting and responding to social cues and verbal instructions, (g) heightened anxiety, (h) fatigue, (i) managing peer pressure, (j) social and personal boundaries, (k) problem-solving and stress management, (l) abstract thinking, (m) fine and gross motor skills, (n) sleep regulation, (o) hypersensitivity to light/sound, and (p) rigidity of thinking. These observations are based on review of staff meeting minutes, advisor notes, and duty logs submitted nightly by Resident Assistants.

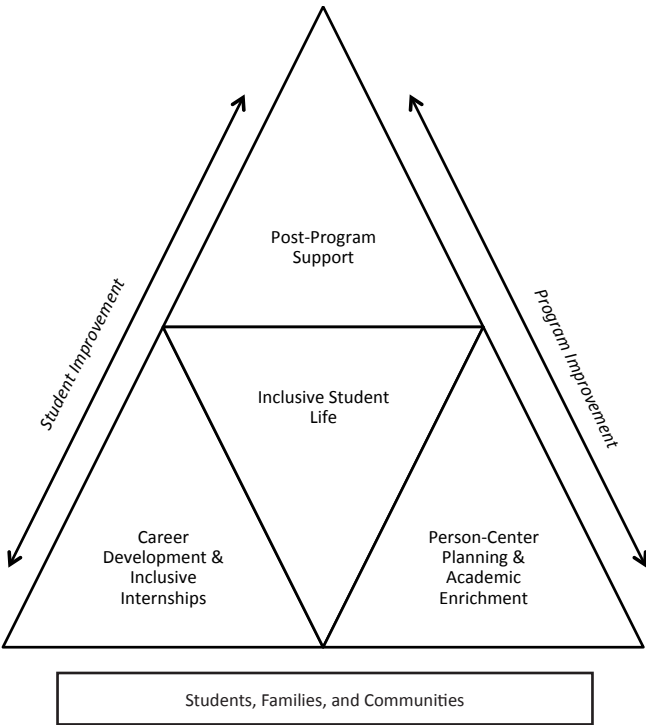


Figure 1. The UI REACH Model

There are a variety of ways in which families gain awareness of the UI REACH program. All families are encouraged to come to campus for a tour of the program prior to applying. They apply using a downloadable application on the program’s website: [www.education.uiowa.edu/reach](http://www.education.uiowa.edu/reach). The completed application is reviewed by an admissions committee and a decision made to interview or not to interview. If an interview is granted, the family and student are interviewed separately. The admissions committee reviews all information and makes a recommendation to admit, not admit, reapply at a future date, or be wait listed. Major factors in admission include the potential of the student to adjust to life in the residence halls and living with a roommate. The motivation of the student to attend the university and to further his or her education is another important factor. Families requiring financial support may submit a FAFSA (Free Application for Federal Student Aid). UI REACH has generous scholarships for both in-state and out-of-state students.

### *The UI REACH Model*

UI REACH is a two-year certificate program designed to provide young men and women with autism and other ID an opportunity for a holistic college experience—an experience similar to that of undergraduates at the university. The mission of UI REACH is to offer students a comprehensive, inclusive college experience to prepare them to become independent, engaged, self-determined young adults (Hendrickson, et al., 2013). The UI REACH model, depicted in Figure 1, emphasizes four areas: (1) Inclusive Student Life, (2) Person-Centered Planning and Academic Enrichment, (3) Career Development and Inclusive Internships, and (4) Post-Program Support. The foundation of these four areas involves dynamic, collaborative interactions with the student, family, and community. Multiple agencies, university entities, community businesses, local and state agencies, and individuals support the UI REACH model in a variety of ways. Each aspect of the model is continually informed via formal and informal mechanisms to facilitate student and program improvement.

The UI REACH model has two distinct goal and activity areas—one that focuses on critical *student* components and the other on critical *program* components. The five *student-centered goal areas* are (a) independent living, leisure, and community, (b) vocation and career development, (c) literacy, academics, and life-long learning, (d) communication and social and interpersonal relationships, and (e) self-advocacy, self-determination, and leadership. The five *program goal areas* are (a) excellence and effectiveness, (b) sustainability and longevity, (c) evidence-based practices, (d) high quality diverse staff, and (e) continuous improvement. All daily, intermediate, and long-range decisions are anchored to these student-centered and program goals.

### *UI REACH Program Description and Operations*

As indicated above, the overarching goal at UI REACH is to foster an authentic, inclusive living-learning college experience. This is accomplished by impacting each student's daily life in ways that promote growth in academics (Solberg, Howard, Gresham, & Carter, 2012), self-advocacy, and self-determination (Weinkauf, 2002), and communication and interpersonal skills (Geller & Greenberg, 2010; McCoy & Hermansen, 2007). Person-centered advising with experienced and trained UI REACH staff (Holburn, Joacobson, Vietze, Schwartz, & Sersen, 2000) facilitates student development and proactive decision-making. Advising sessions allow the student and advisor to develop a trusting relationship (Ferguson, 2010) that is especially valuable in high stakes circumstances (e.g., medical or personal emergencies).

The director of the UI REACH Program is appointed by the dean of the College of Education from a pool of qualified faculty. Staff recruitment and hiring begins with detailed job descriptions, high standards for educational background and experience, and an extensive interview process that includes student involvement and feedback. Once hired, new staff are paired with mentors until they are able to work relatively independently (e.g., as in the role of an advisor). Since collaboration is a vital dynamic in program implementation, every new staff member is cross-trained in a variety of roles and works daily with other staff to provide program services. Staff self-select university and community opportunities for professional development (see *Professional/Staff Development and Training*).

*Student-centered goal activities.* Student-centered goal activities facilitate the development of skills that students need in order to achieve success in the five student-centered goal areas. The following examples are related to the student-centered goal activities and offer a broad overview of regularly occurring UI REACH Program activities.

1. *Communication and collaborative teamwork.*

*Weekly staffings.* In 1984 Tompkins (1984) defined organizational communication as the study of sending and receiving messages that create and maintain a system of consciously coordinated activities of two or more persons, a system that underscores the dynamic and interactive importance of effective communication. At UI REACH communication and collaboration were improved once organizational structures were established to ensure timely and routine face-to-face meetings. UI REACH staff now participate in Monday morning meetings to review each student's status, identify any needs, make action plans, and arrange communications with stakeholders.

*Other meetings.* All-staff business meetings and UI REACH leadership team meetings are scheduled weekly. Program staff also meets as needed to plan and execute tasks associated with each division of the UI REACH Program.

*Team structure.* Staff have 12-month appointments and participate in a wide range of shared instructional, advising, and outreach responsibilities. Most staff members work as part of a specialized division, supervised by the Coordinators of Career Development and Transition (CDT) and Student Life and the Associate Director who oversees Academic Enrichment.

2. *Core UI REACH curriculum.*

Almost two decades ago, Clark, Field, Patton, Brolin, and Sitlington (1994) presented the position of The Division on Career Develop-



ment and Transition which affirmed the life skills approach for all students to enable them to meet the demands of adulthood. UI REACH students are full time students who participate in a minimum of six semester hours of required core classes. Core classes at UI REACH are designed to improve students' life skills in such areas as health and wellness, financial management, career awareness and development, social and interpersonal skills, literacy, and computers and technology, to name a few. Core classes are taught cooperatively, by either two co-teachers (Walther-Thomas, 1997) or a lead teacher and a mentor. Courses of 1- 4 semester hours meet in classrooms across campus with a typical class size of 12-20 students.

Academic enrichment occurs in all core classes, focusing on targeted subgroups or individual students. Enrichment activities are selected to more extensively explore and experience course-related content (e.g., research costs associated with purchasing a pre-owned car, test drive a vehicle). These activities are chosen for their content relevancy, meaningfulness to the individual student, and potential to increase students' critical thinking and discovery. In addition, UI REACH students attend study sessions two to three late afternoons per week and may go to a Wednesday evening study session in the residence hall. Students are assisted by trained tutors who support completion of course assignments. Tutors are encouraged to be respectful, build rapport, use multiple strategies for assisting students (e.g., active listening techniques, serving as a scribe, organizational strategies), communicate with and bring questions to staff, and generally create a supportive learning environment for all students.

### 3. *Weekly person-centered advising.*

The UI REACH Program assures a student-centered approach by assigning a specific advisor to each student. Once the student arrives on campus, the advisor meets individually each week with the student using a person-centered approach described by Ferguson (2010). Advisors mentor students on personal and academic goals, daily academic and campus life concerns, and issues related to social-emotional and mental health status. CDT staff work with individual students in formulating transition and career objectives and facilitate the development of a person-centered transition plan with inclusive employment, education, living, and leisure options for students after graduation (see Flannery, Newton, Horner, Slovic, Blumbeery, & Ard, 2000).

The advisor's role exceeds the role of typical collegiate advisors, in part due to the possibility of an interaction between transition to college issues and disability related concerns (Whitney-Thomas &



Hanley-Maxwell, 1996; Zager & Alpern, 2010). That being said, many of the challenges of UI REACH students are the same as those of undergraduates [e.g., loneliness, homesickness (Eshbaugh, 2008); social involvement (Inkelas, Daver, Vogt, & Leonard, 2007)].

Adolescence and early adulthood is a period of marked change (Santrock, 2005). The development of healthy, mature relationships, the achievement of personal competence, the establishment of one's own identity and purpose, and the self-management of one's behavior and emotions are challenges and recurrent themes for UI REACH students during the advising process. Should a student have an acute or persistent psychological issue, the student is referred to campus or community resources designed to address those issues. Depending on the situation, the advisor may serve as a liaison between the family and university/community services (e.g., speech and language therapy, recreational, counseling services).

When a student goes to college the relationship between the student and his or her family (the word family or parent is used as a proxy for guardian in this manuscript) changes. UI REACH advisors facilitate systematic student-family communication and support students and families as they adjust to the increased independence of their son or daughter. As part of the program's philosophy of fostering independence, students are encouraged to communicate directly with parents and to voice their perspectives, opinions, and wishes in an adult manner. Since direct communication may be difficult for the student, the advisor helps the student determine a plan of action on how to provide the parent with the appropriate information. For example, it may be determined that the family needs to be involved in an issue that has arisen but the student is reluctant to talk with his/her parent. The advisor and student might first rehearse what will be said. The advisor would place the call and speak with the parent briefly to introduce the topic, allow the conversation to occur—interjecting as needed, and summarize.

*Inclusive residence hall life.* UI REACH staff often refers to the residence hall as “our most important classroom.” Inclusive residence hall life means that UI REACH students are integrated into Stanley Hall, a vibrant coed community of close to 400 students centrally located on the UI campus. This residence hall allows easy access to such resources as a fitness center, computer lab, dining facility, convenience store, and outdoor basketball courts as well as university classrooms and the downtown area.

The positive impact of residence hall living (Pascarella & Terenzini, 2005) and living-learning communities is well recognized (Longerbeam, Inkelas, & Brower, 2007). Resident Assistants (RAs) play a

key role in the transition of UI REACH students to college. UI REACH RAs have self-selected to serve on floors with UI REACH students. They are vital team members and are the go-to staff for UI REACH students on weekends and in the evenings. The RA helps develop a safe, supportive, and inclusive living-learning community.

UI REACH RAs participate in all of the training activities and requirements that traditional RAs do. In addition, throughout the year the Coordinator of Student Life and/or Student Life staff meet weekly with RAs to provide on-going training which addresses issues ranging from day-to-day procedures, to roommate disagreements, housing violations, characteristics and issues of specific students, and organizing successful community activities. RAs are also supported by UI REACH on-call staff who update them nightly on issues that may have arisen during the day (e.g., a visit to a walk-in clinic) or decisions (e.g., a curfew adjustment) that may impact students.

Four UI REACH RAs live at Stanley Hall, two on each floor where UI REACH students reside alongside traditional university students. UI REACH RAs keep a nightly duty log of student activities, teachable moments, community engagement, and any concerns that arise. Duty logs are important communication tools that are provided to all staff early the next morning.

In all, UI REACH RAs support an inclusive hall community by creating a positive and welcoming environment, getting to know students individually and in groups, being visible and available, and establishing close personal connections with students. They help maintain a community atmosphere that is conducive to an academic focus, respect of self and others, social engagement, and student success (Vander Busard, 2012).

*Integrated academics.* In order to support a comprehensive, inclusive college life experience, UI REACH students participate in various inclusive academic experiences. Two venues, reverse integration and inclusive academics, are described below.

*Reverse integration.* A number of core classes (e.g., Career Exploration, Job Search Strategies) are offered as reverse integration courses in which UI REACH and traditional students enroll in a class together. If a traditional student is seeking a Disabilities Studies Certificate, he or she may meet certification requirements in these courses. Traditional students also participate concurrently in a seminar to enhance their understanding of young adults with autism and ID. Students from therapeutic recreation, teacher education, rehabilitation and educational counseling, and other fields find that the reverse integration experience enriches their professional knowledge and skills and affords them the opportunity to know UI REACH students as peers.

One reverse integration student spoke about a false assumption that she held regarding the learning trajectory of students with autism and ID. She reported to the Advisory Board that she was really surprised and rewarded to see how much UI REACH students change and grow in one semester (Brailov, R., REACH Advisory Board Minutes, November 8, 2012).

*Inclusive coursework.* UI REACH students also participate in a number of UI courses. They are supported in various ways depending on the course. For example, UI REACH students prepare for and attend a large lecture class with mentors who are fellow classmates. Two UI REACH instructors attend the class, review and/or modify lecture materials, and later assist with assignments. Another example is one in which a UI REACH instructor supports a social studies professor who partners UI REACH students and social studies teachers-in-training in a Historical Documentary Making class. UI REACH students also routinely participate with UI students in a variety of enrichment activities offered by the UI College of Education (COE) Teacher Leader Center (TLC). An example of an enrichment experience offered through the TLC is a regular fall event where UI REACH students comprise a panel and offer their insights on how inclusion worked for them in middle school to an audience of over 100 students.

*Student-driven inclusive internships.* A major component of the UI REACH program is the preparation that leads to successful internships and eventually, successful employment. At UI REACH core classes, internships, and other activities are designed, as recommended by Luecking and Gramlich (2003), to explicitly demonstrate the connections between work and classroom-based learning, to set clear expectations for workplace performance, and to provide students with well-structured feedback. In addition, internship development is closely aligned with each student's preferences and interests.

A sequence of required career education coursework, coupled with elective seminars support students as they explore career options and expand their career interests. Students identify two to three top career interest areas, learn how to search and apply for a position, and participate in inclusive internship experiences. Internships may occur on the UI campus (e.g., the library, recreation center, an academic department) or in a local community setting (e.g., the Veterans Affairs Hospital, a retail store, a car dealership). A major goal is to develop students' soft skills related to understanding and meeting workplace expectations (e.g., appropriate on the job dress and behavior, communication requirements). Students also learn time management and eventually use the transportation system independently. Internship students receive ongoing support and supervision from UI REACH

staff and site supervisors. Unlike some programs, UI REACH internship placements are not intended to segue into permanent employment.

*Campus and community engagement.* Throughout the academic year UI REACH students explore and participate in numerous leisure and service activities on campus and in the community. These activities are central to the development of student self-confidence, social skills, and interests. UI REACH students are expected to participate in an average of three or more activities each week. Students receive information about hall, campus, and community events each week in order to assist them in identifying activities that they might enjoy. Students attend activities suggested by staff, alternate events, or join campus organizations they choose.

UI REACH students also are systematically introduced to service activities within the local community through coursework, advising, and resident hall and university organizations. For instance, UI REACH students recently volunteered at several local organizations (e.g., Ronald McDonald House, the Salvation Army, Habitat for Humanity).

Another important form of campus engagement pertains to recreational sports and physical activity--elements associated with having a healthy and balanced lifestyle. Wellness principles, fitness, and physical activity are infused into the UI REACH curriculum. Students are routinely supported in individual and group fitness activities.

*Program goal activities.*

*Advisory board.* The UI REACH Advisory Board is a group of leading professional, business, and other leaders from Iowa and the United States. Board members are dedicated (a) to promoting the education, life skills development, and career opportunities for youth with autism and ID and (b) to providing a strategic vision and support to the ongoing development and success of the UI REACH program. The Advisory Board meets annually and engages throughout the year to promote the mission and sustainability of the program. The UI REACH Advisory Board provides common advisory board supports including input on strategic planning, programmatic operations, and fundraising efforts (Olson, 2008).

*Support of university systems.* The involvement and dedication of multiple constituencies, from the president's office to various colleges, departments, organizations, and resources within the university, undergird the UI REACH program. The initial support of the University President, the COE Dean, the Department of Teaching and Learning Chair, and the State of Iowa Board of Regents created the

foundation from which UI REACH has been able to reach out and involve faculty, staff, and students in an ever widening inclusive circle of opportunity for all. Essential to assuring an integrated approach are such entities as the Office of the General Council, the Office of Governmental Relations, the University of Iowa Foundation, University Communication and Marketing, Undergraduate Admissions, the Office of Student Financial Aid, the Office of the Registrar, University Housing and Dining Services, Student Health, and the UI Counseling Center. UI REACH program administrators and staff routinely work with representatives of university-wide systems and university-level administrators.

*EXTEND: The UI REACH family-alumni association.* Subsequent to the graduation of the first two cohorts of UI REACH students, families and staff realized that a structure for maintaining connections among alumni and families who had become resources to one another was needed. In response, EXTEND, a family-alumni association was formed. The EXTEND mission is to ensure that UI REACH members have lifelong opportunities to connect with each other, to support future students, and to remain engaged with The University of Iowa. EXTEND provides for ongoing communication among members and identifies and supports activities to enhance the life opportunities of UI REACH alumni and families.

Activities of EXTEND vary depending on need and are supported by the UI REACH program. For example, EXTEND sponsors quarterly topical teleconference meetings and offers "ReCon" events, social gatherings in off-campus communities (e.g., Chicago, Minneapolis). The EXTEND Steering Committee holds regular teleconferences and makes suggestions for improving the UI REACH Program, assisting incoming students and families who are transitioning to college, and supporting students who are in the program.

*Community, business, and department partnerships.* The UI REACH curriculum has a strong focus on student involvement with (a) area businesses and agencies and (b) campus departments. The CDT curriculum scaffolds from career awareness coursework to full inclusion internships based on student interests and preferences. Throughout the two-year program, students learn not only on campus, but from area business people and field trips into the community. The service component of the UI REACH curriculum emphasizes active student engagement with multiple public and private agencies. A focus on building student knowledge of and participation in community organizations and activities begins early in the program.

Empirical evidence supports interagency collaboration (Benz, Lindstrom, & Yavoanoff, 2000), therefore an Employment Advisory

Council (EAC) was established to facilitate interagency partnering and to provide overall guidance and support to the CDT division of UI REACH. The EAC is comprised of 8-12 local business and agency people with knowledge about business and employment trends. The EAC meets three to four times per year for updates on the CDT division goals and provides input on future goals. The EAC assists in the identification of potential internship sites. EAC members also support the UI REACH Program by facilitating tours of their businesses/agencies, serving as guest speakers in UI REACH classes, marketing the UI REACH program locally, and providing internship experiences at their own businesses.

*Professional/staff development and training.* Professional development of teachers (McIntyre, & Byrd, 1998) is critical to educational reform and is an ongoing process that must have relevance to the individual and the collective. UI REACH staff routinely participates in self-selected and team requested professional development and training opportunities. These training opportunities are arranged and offered by the UI REACH Program, provided through the UI COE and the larger university and by professional organizations like the CEC. Learning and teaching opportunities vary in format, from face-to-face, to online, or a combination of both.

For example, the college vis-a-vis the TLC offers "boot camp" workshops with a focus on the areas of assessment, technology, and community/diversity. The university offers a number of in-person and online professional development opportunities through university-wide offices and numerous colleges, departments, and centers. UI REACH staff regularly participates in ongoing opportunities to learn about topics such as assistive technology, wikis and/or web-conferencing, interacting and working with challenging people, and sexual harassment prevention training.

UI REACH staff also regularly reaches out to provide education to others through panels, tours, and presentations at school districts and other agencies, to students and faculty at the university, and to audiences at regional and national conferences.

*Multi-modal, iterative evaluation process.* Based on the general principles of educational program evaluation, the UI REACH approach to student and program evaluation and improvement is consistent with the formative approach (Worthen, Sanders, & Fitzpatrick 1997), including external evaluators. Our basic operational plan utilizes *Management by Objectives* principles as recommended by McConkey (1979). Feedback from multiple stakeholders (e.g., students, staff, family, faculty, boards, agencies) via multiple venues (e.g., meetings, advisor reports, questionnaires, external entities) are employed to



assess our status and progress in the five student-centered and five program goal areas noted earlier. Regularly scheduled assessments of both student progress and program dimensions are undertaken. The process is an iterative system of design-redesign, implementation-revision-implementation, and assessment/evaluation. Refinement of program components, therefore, is a continuous process which results in modifications ranging from changes in course content to staff responsibilities to the revision of operational processes that affect program quality and student outcomes.

*Students with Autism Spectrum Disorder: Perceptions and Experiences*

Zager and Alpern (2010) noted that access to college programs for students with ASD is now a possibility, yet caution that student success hinges in no small part on social communication supports. These authors express the concern that although college may be accessible, the challenge lies in providing appropriate supports in areas such as time-management, choice making, and social interaction.

To better understand the experiences of these students, including their achievements and challenges while attending UI REACH, the College Adjustment and Program Evaluation Survey (CAPES; Hendrickson & Woods-Groves, 2010) was developed by the authors. As part of the initial stage of instrument development, a series of three drafts and draft revisions were subjected to expert review by faculty and providers. The CAPES has 37 items (rated on a Likert scale of 1 – 4; 1=strongly disagree, 2=disagree, 3=agree, and 4=strongly agree) and six open-ended items. The CAPES rated items pertain to the domains of Student Life (9 items); Interpersonal Relationships (6 items); Self-Advocacy (5 items); Independent Living Skills (12 items); and Emotional Adjustment (5 items). Open-ended items query about issues related to the best and most challenging aspects of their experiences.

*Psychometric properties of the CAPES.* The development of the CAPES has been a dynamic and ongoing process. As students who attend UI REACH have completed the survey this has increased the sample size and added statistical power to the ongoing analysis of the instrument. Completed CAPES surveys ( $n = 262$ ) from 2010 to 2012 were analyzed. The current CAPES normative sample consists of approximately 80 UI REACH students, the majority of whom ( $n = 61$ ) completed the survey four times (i.e., Fall-December, and Spring-April of each year), and 19 students who completed the CAPES in Fall 2012. An examination of the item distributions for all of the 37 Likert-type CAPES items revealed that all skew and kurtosis values fell within Curran, West, and Finch's (1996) criteria of  $\pm 2.0$  for skewness and  $\pm 7.0$  for kurtosis.



With regard to internal consistency, Cronbach's alpha coefficients were calculated for the items for each of the five CAPES domains. Alpha coefficients for the respective items for each of the five proposed CAPES domains included (a) Student Life,  $\alpha = .79$ ; (b) Interpersonal Relationships,  $\alpha = .65$ ; (c) Self-Advocacy,  $\alpha = .65$ ; (d) Independent Living Skills,  $\alpha = .83$ ; and (e) Emotional Adjustment,  $\alpha = .50$ . Four of the five alpha coefficients met Salvia, Ysseldyke, and Bolt's (2012) criterion that research instruments must yield coefficients of at least .60 (the exception was in the domain of Emotional Adjustment).

A preliminary investigation of the construct validity of the CAPES was conducted, and an exploratory factor analysis of the 37 items yielded a scree plot that identified five factors. A principal components factor analysis with a Varimax rotation revealed a five-factor solution. A total variance of 42.20% was recovered. The range of factor loadings for the respective items for each of the five proposed CAPES domains included (a) Student Life, .42 - .64,  $mdn = .53$ ; (b) Interpersonal Relationships, .40 - .63,  $mdn = .44$ ; (c) Self-Advocacy, .31 - .55,  $mdn = .42$ ; (d) Independent Living Skills, .33 - .62,  $mdn = .52$ ; and (e) Emotional Adjustment, .43 - .83,  $mdn = .82$ . One item did not load on any factor (item 22, "I spent too much money").

While the participant-to-item ratio met the minimum ratio of five participants to each item, a ratio of 10 to 20 individuals to each item is preferred (Gorsuch, 1983). Our preliminary analyses have provided tentative support for the five CAPES domains. Further instrument development will continue as the needs of the program evolve and the normative sample grows.

*Administration of the CAPES.* To date fourteen students with ASD have participated in the UI REACH Program. The CAPES is a group administered survey with mentors available to assist students and two instructors available to assist mentors. Individual scribes and mentors sat next to each student to assist with any reading or response issues. Paper/pencil surveys were administered through May 2011; electronic surveys were administered in the 2011-2012 academic year. The survey usually was completed in one hour, with extra time allowed.

*Students' perceptions.* The students with ASD whose data are reported herein were enrolled in the UI REACH Program between August 2008 and May 2012. All students completed all items on each survey. The students averaged 20 years, 3 months ( $r = 18$  years, 3 months to 22 years, 0 months) of age upon enrollment. Their academic achievement grade levels ranged from 3.4 to 13.0 with a mean grade level of 6.6. Their full scale intelligence scores' average was 77 (range = 64-107, based on information available on 12 students).

The preliminary, descriptive data indicate that students with ASD are adjusting well to campus life, UI REACH, and the university campus. Thirty-three of 37 student responses consistently averaged  $< 3.0$ , the “agree” level (range =  $3.12 = 3.64$ ). Only four items fell below  $3.0$  (range =  $2.67$  to  $2.93$ ). Table 1 presents the overall means and standard deviations of all rating items completed across four administrations. It shows the items in Student Life, Interpersonal Relationships, Self-Advocacy, Independent Living, and Emotional Adjustment.

On average, in the domains for Student Life and Interpersonal Relationships the students “agreed” to “strongly agreed” that they liked ( $M = 3.52$ ) and had many new experiences ( $M = 3.43$ ) in the university, and that living in the residence hall was a learning experience ( $M = 3.38$ ) for them. Importantly, they “agreed” to “strongly agreed” that they had made new friends ( $M = 3.62$ ), got along with others ( $M = 3.29$ ), and that having a roommate was a good thing ( $M = 3.12$ ).

In the domain of Self-Advocacy, the students on average “agreed” to “strongly agreed” that they knew how to use the buses ( $M = 3.57$ ), that they tried to improve their health habits ( $M = 3.23$ ), and that they were willing to ask for help ( $M = 3.20$ ). Students’ overall assessment of their Independent Living Skills also was positive; they felt more independent ( $M = 3.56$ ) and were practicing safe habits ( $M = 3.60$ ). Cleaning their own room and doing their own laundry was also rated high ( $M = 3.64$ ). In the domain of Emotional Adjustment, the students on average “agreed” to “strongly agreed” that they emailed or called home often ( $M = 3.19$ ), and that they were often happy ( $M = 3.24$ ).

When we examined the students’ responses to open-ended questions, we observed that their most frequent responses to what their favorite activities were included hanging out with new friends and participating in university sporting events, student organizations, and the local community. Their most frequently reported challenges were difficulties with roommates, living in the dorm, knowing where to go on campus, and dealing with the stress of graduating from the program. When asked where/how they believed they had grown or improved, students stated that they showed improvement in their ability to (a) show tolerance and respect toward others, (b) become involved in new activities, (c) communicate clearly, (d) manage money, (e) use technology, (f) take care of themselves, and (g) live like an adult. Changes they said they would make if they could enter the program again as a new student would be to participate in all activities, be better students, follow the rules, and spend more time in the community.

Anecdotal observations of the UI REACH staff indicate that they believe many of the most important learning experiences for students

Table 1  
Mean and Standard Deviations of CAPES Items Rated by Students with Autism and Intellectual Disabilities Across Four Semesters

Dom	CAPES Item	M	SD	Dom	CAPES Item	M	SD
1 SL	I had many new experiences at the university.*	3.43	.57	31 SL	I learned new things in my classes.	3.25	.72
2 SL	Living in the residence hall was a learning experience for me.*	3.38	.67	37 SL	Having a roommate was a good thing.	3.12	.70
4 SL	I liked being part of the university experience.*	3.52	.63	11 E	I was often [happy] sad.**	3.24	.76
8 SL	Advising meetings were helpful to me.*	3.35	.64	14 E	I emailed or called home often.	3.13	.78
9 SL	The teachers supported my learning.*	3.31	.69	24 E	I was [not] homesick most of the time.**	3.19	.78
10 SL	Most classes were interesting.	2.90	.87	28 E	I was often [happy] unhappy.**	2.93	.75
15 SL	The RAs were helpful to me.	3.11	.76				
6 ILS	I became more independent.*	3.56	.53	25 ILS	My organization skills improved.	3.25	.67
13 ILS	I learned to communicate better.*	3.45	.51	26 ILS	I learned about my job interests.	3.27	.59
18 ILS	I learned more about my personal challenges (organization, safe travel Hygiene, getting to class, money issues).	3.30	.65	32 ILS	I used hall and community resources (the laundry, Bijou theater, fitness center, CVS, restaurants)*	3.55	.55

Note. Bolded Dom = Domain and item number, SL = Student Life, E = Emotional Adjustment, ILS = Independent Living Skills, IR = Interpersonal Relationships, SA = Self-Advocacy. \* Items were reverse coded, [ ] = meaning of item. \*\*=highest ratings in domain. NL = did not load on any domain. (N=14)

Table 1 (continued)

Dom	CAPES Item	M	SD	Dom	CAPES Item	M	SD
<b>20 ILS</b>	I practiced safe habits (room locked, keys and ID with me, crossed street safely).*	3.60	.60	<b>33 ILS</b>	I did my best to succeed.*	3.59	.50
<b>21 ILS</b>	I cleaned my room and did my own laundry.*	3.64	.51	<b>35 ILS</b>	I met my semester goals.	3.26	.53
<b>23 ILS</b>	I learned about correct public behavior.	3.16	.69	<b>36 ILS</b>	I better understand my disability.	3.20	.76
<b>3 IR</b>	I learned to solve problems of my own.	3.28	.54	<b>7 SA</b>	I used the 'buddy system' to go places.	2.67	.92
<b>5 IR</b>	I made new friends.*	3.62	.54	<b>12 SA</b>	I enjoyed group activities in the community.*	3.15	.69
<b>16 IR</b>	Study tables helped me get homework completed on time.*	3.51	.57	<b>19 SA</b>	I tried to improve my health habits (exercising, eating better, managing stress).*	3.23	.63
<b>17 IR</b>	My parents were supportive.*	3.56	.65	<b>27 SA</b>	I was willing to ask for help.*	3.20	.67
<b>29 IR</b>	I felt respected by the other students.	2.93	.78	<b>30 SA</b>	I know how to use the buses.*	3.57	.54
<b>34 IR</b>	I got along with others.*	3.29	.61	<b>22 NL</b>	I [did not] spend too much money.**	2.77	.83

Note. Bolded Dom = Domain and item number, SL = Student Life, E = Emotional Adjustment, ILS = Independent Living Skills, IR = Interpersonal Relationships, SA = Self-Advocacy. \* Items were reverse coded, [ ] = meaning of item. \*\* highest ratings in domain. NL = did not load on any domain. (N=14)

with ASD occurred when they were involved in campus and community activities. Staff also noted that living with a roommate in the dormitory setting, participating in inclusive internship experiences, and learning (via therapy, class, and advising work) more effective communication skills and strategies were especially meaningful for these students. As reported in the literature (e.g., Adreon & Durocher, 2007; Hendricks & Wehman, 2009), staff noted that students with ASD experienced difficulties with communication and understanding social cues, behaving appropriately across contexts, and managing stress. Staff reported that they thought three critically important components of PSE programs such as UI REACH are the personalized supports for students, the provision of a rich array of opportunities for engagement on and off campus, and living independently in a diverse same-aged peer community.

### Discussion

We have described the UI REACH Program model with an emphasis on student-centered and program goals. We have articulated, in relative detail, examples of goal activities associated with a design and implementation process that are the foundational structures and activities essential to the holistic, inclusive educational opportunity provided at UI REACH. In addition we have presented the perceptions and opinions of 14 students with ASD regarding their campus-based living-learning experience. These data indicate that the students with ASD “agree” to “strongly agree” with items indicating a positive adjustment to college in the areas of student life, interpersonal relationships, self-advocacy, independent living, and emotional adjustment.

Both foci of this article, the program description and student perceptions, are intended to contribute to closing the information “how to” gap in the provision of PSE to students with ASD and other ID. Our purpose is not to advocate for a particular PSE model, recognizing that students and families may have substantially different needs. In the ideal big picture, families and students would have a range of options so that their vision of the college experience would match their living-learning goals and support requirements.

As we compiled information for this article we reflected upon the truly dynamic, seriously challenging, and wonderfully rewarding aspects of being part of the team that transforms a shared vision into a well-functioning, high quality program. The ongoing development (first 5 years) of the UI REACH Program paralleled to varying degrees the three basic stages of organizational development described by Allen (2012). According to Allen, Stage I: Chaos is a fire-fighting mentality with a focus on short-term goals, unclear policies and pro-

cedures, and shifting priorities. Stage II: Stability is characterized by clarification of roles and responsibilities, goals, and priorities. Stage III: High Performance is achieved with good communication and information sharing and with work flow and other systems supporting the mission. The UI REACH five program goal areas: excellence and effectiveness, sustainability and longevity, evidence-based practices, high quality diverse staff, and continuous improvement, have been guideposts for moving into Stage II and Stage III with its shared ownership and a deep belief in and commitment to PSE for students with ASD and ID by all staff.

### Conclusion

The provision of PSE options for all young adults with disabilities, not only ASD and other ID, presents exciting challenges and opportunities for institutions of higher education, communities, agencies, and families whose partnerships are essential for ensuring that a range of quality, accessible educational opportunities supported by evidence-based practices are available to students nationwide. There can be little doubt that students with ASD and ID can adapt, succeed, and even flourish in appropriately structured and supported learning environments (Hendricks & Wehman, 2009). Preliminary data of Hendrickson and colleagues (2013) indicate that students with ASD and ID attending a holistic, campus-based PSE program are similar to traditional undergraduates in terms of psychological well-being (i.e., self-acceptance, personal growth, purpose in life, positive relations with others, environmental mastery, autonomy) and openness to diversity.

The growing trend of students with autism and ID attending PSE programs, as noted by Ludlow (2012), refutes conventional wisdom of “who” should go to college. Extant data documents improved adult outcomes for individuals who attend PSE programs (Moon et al., 2011). The time has come for educators, families, and communities to join together to create quality PSE opportunities for *all* students, including students with emotional and behavioral disorders, students in the juvenile justice system, and students with mental health challenges.

Much program development and research remains to be conducted. The UI REACH Program has begun to examine the perceptions of students while they are in college, and there is much to discover about how to maximize their college experience. We know little about how overall program design or specific program components affect student adjustment to college, academic and life skills learning, career development, and quality of life. We know even less about

long-term outcomes of PSE. Thus, it behooves educators and researchers to begin the process of staging longitudinal outcome studies now so that the impact of these different PSE efforts is documented. Post-graduation outcome data (e.g., employment, social life, living circumstances) are vital to identifying effective PSE practices and the types of post-program supports needed to augment and sustain positive adult outcomes.

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